## CLAIMS

- Claim 1. A method for proliferating terminal differentiated cells comprising:
  introducing a cyclin and a cyclin dependent kinase into the nucleus
  of terminal differentiated cells, and cultivating or holding said cells.
- Claim 2. A method for proliferating terminal differentiated cells comprising: adding a nucleotide sequence coding for a nuclear localization signal to at lease one of a cyclin gene and a cyclin dependent kinase gene; and introducing each of said genes to terminal differentiated cells *in vitro*, and then cultivating said cells, or introducing each of said genes directly to terminal differentiated cells *in vivo*.
- Claim 3. The method of claim 1 or 2, wherein said cyclin activates a mammalian CDK4 or CDK6.
- Claim 4. The method of claim 1 or 2, wherein said cyclin dependent kinase is activated by mammalian cyclin.
- Claim 5. The method of claim 1 or 2, wherein said terminal differentiated cells are cardiomyocytes, nerve cells, kidney cells, or pancreatic cells.
- Claim.6. The method of claim.2, wherein said cyclin.gene and said cyclin.dependent kinase gene are transferred to the terminal differentiated cells using an adenovirus vector.
- Claim 7. A recombinant vector comprising a cyclin gene comprising a nucleotide sequence coding for a nuclear localization signal.

- Claim 8. A recombinant vector comprising a cyclin gene and a cyclin dependent kinase gene, wherein at least one of said genes is attached with a nucleotide sequence coding for a nuclear localization signal.
- Claim 9. The recombinant vector of claim 7 or 8, wherein said cyclin is a cyclin that is capable of activating a mammalian CDK4 or CDK6.
- Claim 10. The recombinant vector of claim 7 or 8, wherein said cyclin dependent kinase is a cyclin dependent kinase that is activated by cyclin D1, D2 or D3.
- Claim 11. The recombinant vector of claim 7 or 8, further comprising an adenovirus vector.
- Claim 12. A mammalian cell or tissue that was proliferated by the method of claim 1 or 2.
- Claim 13. A pharmaceutical composition for proliferating terminal differentiated cells or tissues, comprising an effective amount of the recombinant vector of claim 7, 8 or 15.
- Claim 14. A method for treating cardiopathy in a human patient comprising introducing the pharmaceutical composition of claim 13 into the myocardium of the patient, and proliferating a cardiomyocite in the patient.
- Claim 15. A recombinant vector comprising a cyclin dependent kinase gene comprising a nucleotide sequence coding for a nuclear localization signal.

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Claim 16. The method of claim 2, wherein said gene comprising said nucleotide sequence is introduced to the terminal differentiated cells *in vitro*, and cultivating said cells.

Claim 17. The method of claim 2, wherein said genes comprising said nucleotide sequence is introduced to the terminal differentiated cells *in vivo*.